Amendments to the Specification:

Please replace the paragraph [0012] of the published specification with the following amended paragraph:

[0012] More particularly, it holds that in step a. the first ultrasonic beam is directed such that the direction in which the first ultrasonic beam is incident on the interface between the weld and the first pipeline deviates from the normal to a surface of the interface between the weld and the first pipeline at the point where the first ultrasonic beam is incident on the interface. What holds here, preferably, is that in step a. the first ultrasonic beam is supplied to the interface between the weld and the first pipeline via the first pipeline. Further, it holds here, in particular, that in step b. the reflection of the first ultrasonic beam is measured that comes from a direction that deviates from the direction in which the first ultrasonic beam would reflect on the interface according to the rule that the angle of incidence is equal to the angle of reflection, so that the first ultrasonic received signal represents a diffraction~~defraction~~, if any, of the first ultrasonic beam on a flaw in the weld at the interface between the weld and the first pipeline. All this means that in step b. the first ultrasonic received signal comprises information of a possible flaw on the interface between the weld and the first pipeline because especially the ends of any flaw will cause diffraction~~defraction~~ of the first ultrasonic beam. Because the first beam is directed such that the direction of the first beam at the interface between the weld and the first pipeline deviates from the normal to a surface of the interface between the weld and the first pipeline, the first received signal will contain relatively little information (small amplitudes) of a reflection of the first ultrasonic beam on the interface between the weld and the first pipeline resulting from a transition between the medium of the first pipeline and the medium of the weld. Consequently, the diffraction~~defraction~~, if any, resulting from a flaw can be determined relatively well.

Please replace the paragraph [0013] of the published specification with the following amended paragraph:

[0013] In particular, it holds that in step a. the first ultrasonic beam is supplied to the interface between the weld and the first pipeline via the first pipeline. Further, it holds in particular that in step a., for the first ultrasonic beam a longitudinal wave is used. If for the first ultrasonic beam a longitudinal wave is used, this provides the advantage that diffraction~~defraction~~ can be measured relatively well. If a transverse wave were used, enormous reflections would be measured, making it more difficult to determine the diffraction~~defraction~~, if any, resulting from a flaw.

Please replace the paragraph [0041] of the published specification with the following amended paragraph:

[0041] For checking the area 24, in this example, using the probe 18.2, a first ultrasonic beam 30 is transmitted to the area 24. This method step will hereinafter be designated as method step a. Next, in a method step b., a reflection of the first ultrasonic beam on the interface situated on the first side 28 of the weld is received, and a first received signal corresponding thereto is generated. In this example, it holds that in step a. the first beam 30 is directed such that the direction in which the first beam is incident on the interface between the weld and the first pipeline deviates from the normal 32 to a surface of the interface between the weld and the first pipeline at the point where the first beam is incident on the interface. In this example, this is the normal 32 to the surface of the area 24 of the interface 26. It includes an angle $\varphi 1$ with the incident first beam 30. Furthermore, it holds, as is apparent from the drawing, that in this example the first ultrasonic beam is supplied to the interface 26 via the first pipeline 2. It also holds that the first ultrasonic beam is supplied to the first pipeline from an outer side of the first pipeline. For the first ultrasonic beam, a longitudinal wave is used. Furthermore, it holds that the first ultrasonic beam is a pulsed wave. It holds in this example, furthermore, that in step b. the reflection of the first ultrasonic beam is measured that comes from a direction that deviates from the direction in which the first ultrasonic beam would reflect on the interface according to the rule that the angle of incidence is equal to the angle of reflection, so that the first ultrasonic received signal represents a diffraction~~defraction~~, if any, of the first ultrasonic beam on the interface between the weld and the first pipeline. More preferably, it holds that in step b. the reflection of the first ultrasonic beam is

measured that comes from a direction which, at least substantially, coincides with the direction in which the first ultrasonic beam is incident on the interface between the first pipeline and the weld.

Please replace the paragraph [0043] of the published specification with the following amended paragraph:

[0043] If in the area 24 a flaw is present, for instance in that in the area 24 the weld 1 is not connected with the first end 14 of the first pipeline or in that small air bubbles are included at that point, this will have as a consequence that diffraction~~defraction~~ of the first ultrasonic beam on the flaw occurs. This diffraction~~defraction~~ occurs especially at an end of a flaw 36, in this example a missing connection between the weld 1 and the pipeline 2 as shown in FIG. 1c. Diffraction~~defraction~~ entails the first ultrasonic beam being reflected in more than one direction. Besides diffraction~~defraction~~, the first beam will also for a part be reflected on the flaw. Moreover, a portion of the first beam will be reflected as a result of the transition between the medium of the first pipeline (carbon steel) and the weld (austenitic material).

Please replace the paragraph [0044] of the published specification with the following amended paragraph:

[0044] Because in this example in step b. the reflection of the first ultrasonic beam is measured that comes from a direction that deviates from the direction in which the first ultrasonic beam would reflect on the interface according to the rule that the angle of incidence is equal to the angle of reflection, so that the first ultrasonic received signal represents a diffraction~~defraction~~, if any, of the first ultrasonic beam on the interface between the weld and the first pipeline, relatively few reflections of the first beam on the flaw and/or the interface proper will be measured with the ultrasonic probe 18.2, and specifically a diffraction~~defraction~~, if any, on the flaw will be measured. Such a diffraction~~defraction~~ is characterized in a peak 38 in the amplitude A of the first received signal as shown in FIG. 1d. Such a peak 38 is a good indication that a flaw at the interface 26 of the weld is present in the area 24. For transmitting the first ultrasonic

beam, preferably a longitudinal wave is used because a transverse wave will generate unwanted reflections which make it difficult to measure the diffractions~~defractions~~.

Please replace the paragraph [0049] of the published specification with the following amended paragraph:

[0049] Owing to the second ultrasonic beam being directed at least substantially perpendicularly to the interface, in this example the area 24 thereof, any flaw 36 will properly reflect the second ultrasonic beam. Since moreover a reflection is measured in a direction which corresponds to the expected direction of the reflected second beam, this reflection, if any, is measured well. All this is shown in FIG. 1e. The second received signal as shown in FIG. 1e shows first of all a peak 44 which is caused by a reflection of the second ultrasonic beam 40 on the second interface 27 between the weld 1 and the second pipeline 4. Since as a result of the shape of the weld the direction of the incident second ultrasonic beam deviates from the normal 46 to the interface 27 at the point where the second beam is incident on the second interface 27 (see angle α), the thus received reflection on the second interface will be relatively small. Owing to the second ultrasonic beam being incident at least substantially perpendicularly on the interface at the area 24, while a reflection of the second beam is measured in a direction corresponding to the expected reflection direction of the second beam, any flaw 36 in the area 24 of the interface 26 will generate a relatively large reflection. This reflection results in a well-measurable peak 46 in the received signal. Both for FIG. 1d and for FIG. 1e, it holds that the time at which a peak 38, 46 is received is a measure for a position in the material where the diffraction~~defraction~~ (FIG. 1d) and the reflection (FIG. 1e) have taken place. If presently it is determined both on the basis of the first received signal and on the basis of the second received signal that a flaw may be present in the area 24, it is decided that a flaw is actually present. To that end, the first and second received signals are, for instance as discussed above, detected separately from each other. This means that a received defraction from the area 24 of the first beam can be distinguished from a received reflection from the area 24 of the second beam. More particularly, this can be carried out as follows. The amplitude of the first received signal can be compared with a first reference to determine whether the weld at the area 24 may comprise a flaw.

Furthermore, the amplitude of the second received signal can be compared with a second reference to determine whether the weld at the area 24 may comprise a defect. The first and the second references may for instance have been pre-determined on the basis of a weld which in effect comprises a flaw at the area 24, or on the basis of reflections and measuring objects which can simulate such a flaw. It is concluded that the weld actually comprises a flaw when both on the basis of the first received signal and on the basis of the second received signal it is concluded that the weld may comprise a defect. In this example, it holds that the first ultrasonic beam and the second ultrasonic beam are incident at least substantially on a same area of the interface between the first pipeline and the weld in order for this area of the interface to be checked.

Please replace the paragraph [0056] of the published specification with the following amended paragraph:

[0056] The invention is not limited in any way to the embodiments outlined above. As stated, it holds in step b. that the reflection of the first ultrasonic beam is measured that comes from a direction that deviates from the direction in which the ultrasonic beam would reflect on the interface according to the rule that the angle of incidence is equal to the angle of reflection. What is thus accomplished is that precisely any diffractions~~defractions~~ of the first ultrasonic beam resulting from flaws at the interface between the weld and the first pipeline are measured. Any reflections resulting from such a flaw and/or reflections resulting from the medium transition from the pipeline to the weld, will be measured rather in other directions. If it is preferred that the ultrasonic probes are situated on the outer side of the pipeline, increasing the $\varphi 1$ in FIG. 1a will have as a result that the discriminatory power between measurements of diffractions~~defractions~~ on the one hand and reflections on the other increases. If specifically no reflections are to be measured, it is moreover preferred to use the same probe for receiving the first ultrasonic beam as the one used for transmitting it. For in that case, too, it is precisely any diffraction~~defraction~~ that is measured, and not any reflection. It is also possible, however, for a diffraction~~defraction~~ of a the first ultrasonic beam to be received with, for instance, a different probe, such as probe 18.3. It is also possible that any diffraction~~defraction~~ is measured with a probe 60 situated on an inner side of the

pipeline. The first ultrasonic beam (see FIG. 2) can then be transmitted, for instance, by means of the probe 18.i and be received after reflection by the probe 60. Because the angle φ1 deviates from the angle φ2, again especially any diffractions~~defractions~~ on flaws will be measured, and no reflections. It is, of course, possible here that the first ultrasonic beam is transmitted with the probe 60, to be subsequently received with the probe 18.i.

Please replace the paragraph [0059] of the published specification with the following amended paragraph:

[0059] Also for transmitting the first ultrasonic wave, probes situated on an inner side of the first or second pipeline can be used. In the example of FIG. 3, a probe 64 is used which is situated on an inner side of the second pipeline, for transmitting and receiving the first ultrasonic wave 30. Because in this example the first ultrasonic wave is a longitudinal wave, it can also propagate well through the austenitic weld 1. Any diffractions~~defractions~~ of the first ultrasonic wave 30 could also be measured using, for instance, the probe 66 which is likewise situated on an inner side of the second pipeline. It is also conceivable that the diffractions~~defractions~~ referred to are measured by means of the probe 18.3 which is situated on an outer side of the first pipeline. Measuring diffractions~~defractions~~ using the probe 18.3 has as an advantage that the diffractions~~defractions~~ do not need to propagate back through the austenitic material of the weld to the second pipeline 4. What is needed instead is just propagation of the diffractions~~defractions~~ through the first pipeline 1, which in this example is fabricated from carbon steel, allowing good propagation of the sound waves. In both cases, it holds that the probes 64, 66 and 18.3 for the purpose of receiving diffractions~~defractions~~ of the first ultrasonic wave are set up such that no reflections of the ultrasonic wave on the interface 26 are measured.

Please replace the paragraph [0060] of the published specification with the following amended paragraph:

[0060] As shown in FIG. 4, the first ultrasonic beam 30 which is transmitted in FIG. 1 by means of the probe 18.2 will also propagate to an area 24" of the interface 27 between the weld 1 and the second pipeline 4. A reflection of the first ultrasonic beam 30 on the interface 27 can also be measured by means of the probe 18.2. Then it holds here that for examining the area 24" of the interface 27 the first ultrasonic beam 30 can be used in a same manner as the second ultrasonic beam 40 has been used in FIG. 1. The first ultrasonic beam 30 accordingly functions in FIG. 4 as a second ultrasonic beam 40' for testing the interface 27. In FIG. 4, moreover, by means of the probe 20.2, a fourth ultrasonic beam 30' is transmitted to the area 24". The reflection of the beam 30' on the area 24" of the interface 27 is received by means of the ultrasonic probe 20.2, for generating a fourth received signal. The fourth beam has a same function at the area 24" as the first beam at the area 24. This fourth received signal can again comprise a peak resulting from diffraction~~defraction~~ of the fourth ultrasonic beam 30' on a flaw in the area 24". Entirely analogously to what has been discussed above, the first received signal can be combined with the fourth received signal. If both the first received signal and the fourth received signal indicate that a flaw may be present, it is concluded that a flaw is in fact present. Next, using the probe 20.1, a transverse beam 80 can be transmitted which after reflection on the interface and the inner side 10 of the second pipeline in the area proper 4, is received by means of the probe 20.3. The magnitude of the thus obtained received signal is used in this example for determining the magnitude of the flaw if it has been established on the basis of the first and fourth received signals that a flaw is actually present.

Please replace the paragraph [0066] of the published specification with the following amended paragraph:

[0066] Also, a side beam of one of the ultrasonic beams, which, viewed in FIG. 1a, propagates from one of the probes in horizontal direction to the weld (this is a so-called creeping wave), can be used to check a portion of the weld which is situated near the outer surface of the first or second pipeline. Then, not only an interface but also the interior of the weld is checked. The interior situated to the left of the line 80 is then preferably checked by means of creeping waves coming from one of the probes 20.j,

while the interior of the weld to the right of the line 80 is preferably checked with creeping waves coming from one of the probes 18.i. Reflection and diffraction~~defraction~~ of the creeping waves can be received with the same probes as or different probes than those with which the creeping waves were transmitted.